T. L. RILEY.

DENTAL TRAY.

APPLICATION FILED DEC. 22, 1913.

1,139,581.

Patented May 18, 1915.

2 SHEETS—SHEET 1.

FIG. 1.

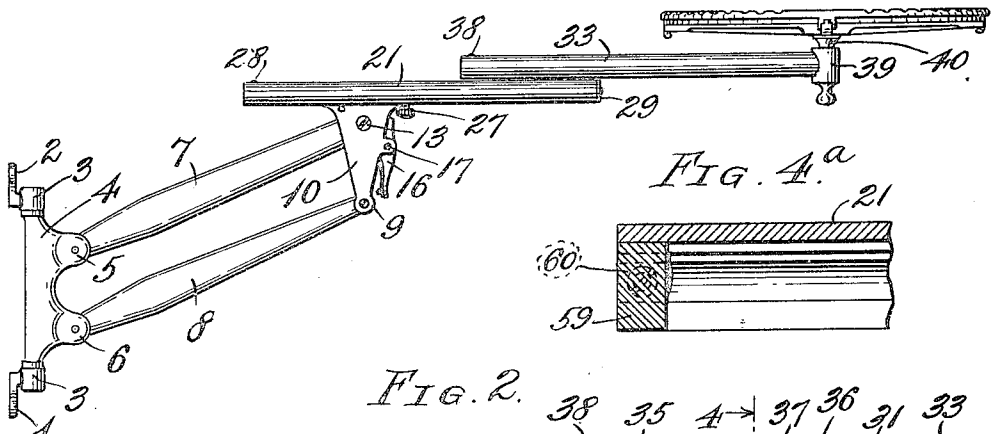


FIG. 4.a

FIG. 2.

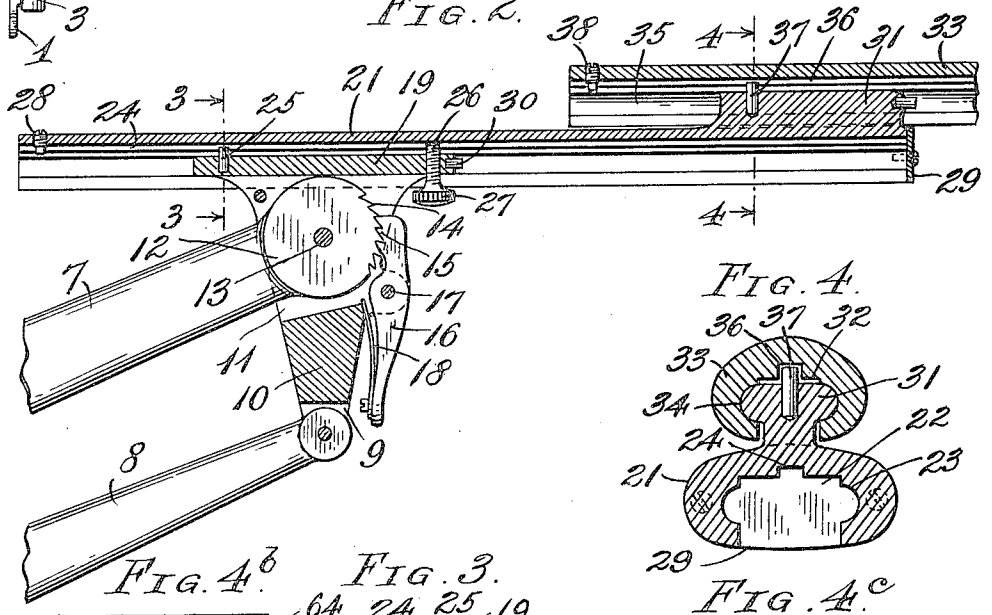


FIG. 4.

FIG. 4.b

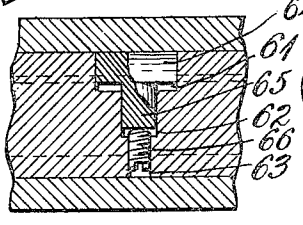


FIG. 3.

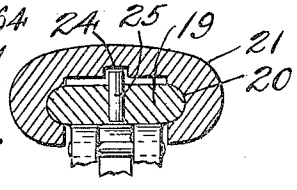
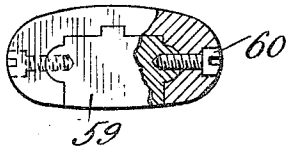


FIG. 4.c



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2 SHEETS—SHEET 2.

FIG. 5.

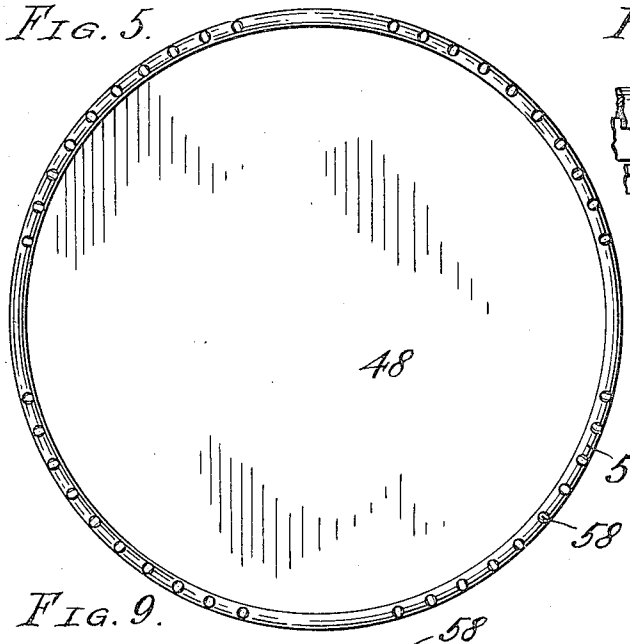


FIG. 6.

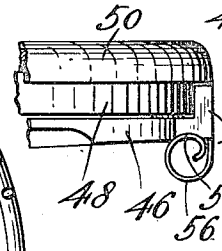


FIG. 7.

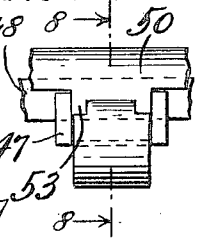


FIG. 8.

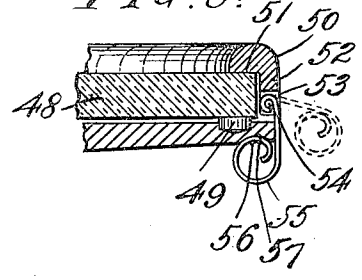


FIG. 9.

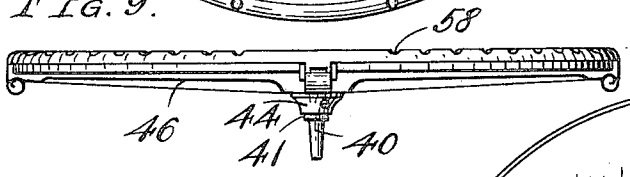


FIG. 10.

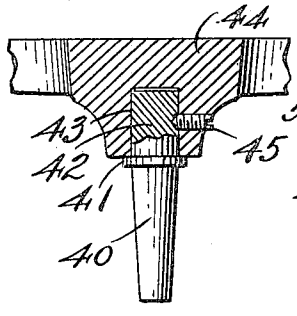
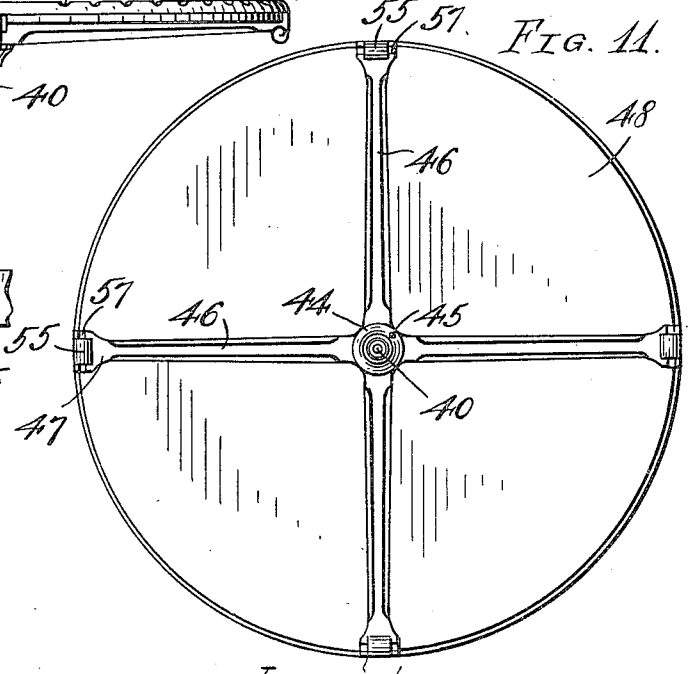


FIG. 11.



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UNITED STATES PATENT OFFICE.

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DENTAL TRAY.

1,139,581. Specification of Letters Patent. Patented May 18, 1915.

Application filed December 22, 1913. Serial No. 808,174.

To all whom it may concern:

Be it known that I, THOMAS L. RILEY, a citizen of the United States, residing at East Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Dental Trays, of which the following is a specification.

This invention relates to work tables or trays generally, and particularly to that class of such devices utilized by dentists.

More specifically the invention relates to a work table or tray supported at the outer end on extensible arms which are in turn supported upon an adjustable bracket which is secured to suitable devices fastened to a wall or other support.

The invention may be further briefly summarized as consisting in the construction and combination of parts hereinafter set forth in the following description, drawings and claims.

Referring to the drawings, Figure 1 is a side elevation of the device; Fig. 2 is a longitudinal section of a portion of the bracket showing the extensible arms; Fig. 3 is a section upon the line 3—3 of Fig. 2; Fig. 4 is a section upon the line 4—4 of Fig. 2; Fig. 4^a is a detail view of a portion of one of the slidable bars showing another form of stop therefor; Fig. 4^b is a horizontal section through one of the bars and one of the guides showing the adjusting device for taking up the wear on the parts; Fig. 4^c is an end elevation of the parts shown in Fig. 4^a; Fig. 5 is a top plan view of the tray; Fig. 6 is a detail view of a portion of the edge of the tray showing one of the fastening clips in side elevation; Fig. 7 is a front elevation of a portion of the tray showing the clip in elevation; Fig. 8 is a section upon the line 8—8 of Fig. 7; Fig. 9 is an elevation of the edge of the tray; Fig. 10 is a detail view of the central portion of the supporting web for the tray; and Fig. 11 is a bottom plan view of the tray showing the supporting web.

In carrying out the invention any preferred form and construction of parts may be employed so long as they possess the necessary characteristics, but I have shown one arrangement in the drawings, which is effective in operation, and in such embodiment 1 represents a lower support, and 2 the upper support, these two devices being secured to the wall or to any other stationary part. Each of these supports is provided with a socket member 3 for receiving bearing portions of a supporting member 4 which is provided with a pair of ears 5 and 6. Adjustably mounted in the ear 5 is one of a pair of parallel arms 7 while the other arm 8 of this pair is pivoted in the lower ear 6. The outer end of the arm 8 is pivoted between ears 9 formed at the lower portion of a bracket member 10. This bracket member is slotted at 11 to receive a boss 12 integral with the arm 7. This boss is pivoted upon a pin 13 extending through the bracket member 10. A portion of the periphery of this boss is provided with suitable teeth 14 adapted for engagement by suitable teeth 15 carried by a lever 16 pivoted upon a pin 17 mounted in the bracket member. A spring 18 normally forces this lever in a position so that its teeth 15 engage with the teeth 14. By this arrangement it will be seen that when the lever is rocked in a clockwise direction, as shown in Fig. 2, its teeth are withdrawn from engagement with the teeth 14 and the bracket together with the arms 7 and 8 may be raised or lowered in a well known manner, and upon the release of the lever, the parts will be held in position. The bracket member 10 is provided with a guide 19 having rounded guiding portions 20, as shown in Fig. 3, and these guiding portions extend out beyond the sides of the supporting bracket 10. Engaging this guiding member is a slidable bar 21 provided with an opening 22 for receiving the guiding portion 19 and a part of the upper portion of the supporting bracket. Suitable grooves 23 are arranged in the lateral walls of this member at the opening 22, and these recesses receive the portions 20. A longitudinal recess 24 is provided in the bar 21 and it receives a pin 25 and the shank 26 of a screw 27 as the bar is slid upon the guiding member. A stop screw 28 extends through the upper part of the bar 21 and is adapted to engage the pin 25 to limit the forward movement of the bar. The movement in the opposite direction is limited by a plate 29 secured to the forward end of the bar covering the end of the opening 22, a rubber bumper 30 being provided in the forward portion of the supporting

bracket to take the shock of the rearward movement of the bar.

Forming a part of the bar is a guiding member 31 smaller but similar in construction to the guiding member 19, and this guiding member 31 engages in an opening 32 formed in a secondary bar 33. In this case, also, the guiding member 31 is provided with rounded projections 34 engaging in rounded recesses 35 in the bar 33. A longitudinal recess 36 is also arranged in the bar for receiving a pin 37 secured to the guiding member 31. Movement of this secondary bar is limited by a screw 38 at the rear and by a socket member 39 formed integral with the bar at its forward end. This socket member receives a shank 40, shown in Fig. 10, of the tray mechanism which will now be described.

The shank 40 is provided with a shoulder 41, and an upwardly extending tray shank 42 adapted for engagement in an opening 43 in a supporting web boss 44. This tray shank 42 is held in place by a suitable screw 45. Extending radially from the boss 44 are suitable webs or arms 46 preferably four in number, and each provided at its outer end with a pair of spaced projections 47, shown in Figs. 6, 7 and 9. Within these projections 47 is laid a plate 48 of any suitable ware, and this plate rests on suitable rubber gaskets 49, one in each of the arms 46. The plate 48 is held down by a peripheral ring 50 having a face 51 engaging the upper face of the plate and an edge flange extending down around the plate. This flange 52 is provided at points corresponding to the arms 46 with downwardly extending ears 53, which receive a pin 54. Swiveled upon this pin is a suitable spring latch 55 having a lower rounded spring portion 56 adapted to engage in a suitable notch 57 formed on the underside and at the end of one of the arms 46. There is a notch on each arm. The upper face of the ring 50 is provided with notches 58 for receiving the handles of tools and the like to prevent their rolling about on the tray.

In use, the operator raises the tray to the proper level by manipulating the lever 16 and the links 7 and 8, and when this is accomplished, the proper distance of the tray with respect to the wall is determined by sliding the bars in an obvious manner. The tray may then be rotated to bring it in proper position. In order to remove the plate for sterilizing or any other purpose, the operator engages the spring portions 56 and pulls them out of their recesses 57 when the entire ring 50 may be lifted from the plate, the later being then free to be removed from its supporting means.

In place of providing the bar with stop screws 28 and 38, I may provide each of the bars with a block 59 which fits the groove in the bar and is held in place by suitable screws 60 entering the sides of the bar. In order to take up any lost motion between the guides and their sliding bars, each of the guides may be provided with an adjusting block opening 61, a shank opening 62 communicating therewith and a screw opening 63 communicating with the shank opening and extending in from the opposite side of the guide for the adjusting block opening 61. Slidably mounted in the adjusting block opening 61 is a sliding block 64 provided with a shank 65 engaging in and guided by the opening 62. This block is moved in and out of the opening 61 by means of a screw 66 which is threaded into the opening 63. When any wear takes place between the guides and the bars, this wear may be taken up by removing the bar and setting up the screw 66.

Having described my invention, I claim:—

1. A supporting bracket for tables or trays comprising a member comprising a supporting bracket mounted upon a fixed support and having a guiding head, a bar having on its underside a longitudinal guideway and recess for said head and on its upper surface near the outer end a guiding head projecting upward therefrom, a second bar having a guiding recess therein for engagement with the second mentioned guiding head, and a work table or tray support carried by the end of said second mentioned bar.

2. A support for work tables and trays comprising a supporting bracket having a guiding head with laterally rounded guiding portions, a pin extending upward from the top of said head, a slidable bar having ways for receiving the rounded portions of said guiding head and also having a longitudinal recess for receiving said pin, a suitable stop at the end of the bar for engaging said pin, a plate at the forward end of said bar for closing the opening forming the guideway, a guiding head mounted on the upper side of said bar and near one end thereof, guiding portions carried by said second mentioned guiding head, a pin carried by this same head, the second mentioned bar having guideways for receiving the guiding portions of the second mentioned guiding head, a recess for receiving a pin carried thereby, a stop carried by one end of the second mentioned bar for engaging the corresponding pin carried by the second mentioned guiding head, and a work table or tray supporting socket mounted on the end of said second mentioned bar.

3. A work table or tray comprising a suitable support, a tray supporting web mounted upon said support and having upturned guiding portions, a plate arranged upon said web within the upturned portions, a clamp-

ing ring engaging the plate, and suitable latches between the clamping ring and the supporting web.

4. In a work table or tray, a support, a table or tray web carried by said support and comprising a central portion, and a peripheral shoulder for engaging the outer edge of the plate, a clamping ring engaging over the edge of said plate and projecting above the surface of the plate, and suitable clamping devices for holding the ring and the plate rigidly to the web.

5. A work table or tray comprising a supporting web having radially disposed arms, an upturned portion carried by each arm, a plate mounted upon said web and engaging within said upturned portions, a ring extending about the edge of the plate and having downwardly extending portions engaging with the upwardly extending portions of the web, and clamping devices carried by the ring and adapted to engage under the ends of the arms of the table or tray web.

6. A work table or tray comprising a web having radially disposed arms with spaced upturned portions at the end thereof, and a transverse recess on the underside of the arm near the end, a plate supported upon the web within the upturned portions, a clamping ring having flanges engaging the face in the edge of the plate, lugs extending downward from said clamping ring and adapted to engage between the projections carried by the arms of the supporting web, a spring clip carried by each lug and having a rounded spring latch adapted for engagement in a transverse notch formed near the end of each arm.

7. A support for tables or trays comprising a supporting bracket mounted upon a fixed support and having a guiding head, a hollow bar having a slot in its underside and receiving said head and slidable thereon, and means arranged in the head and adapted to be forced out into engagement with the wall of the bar to take up any lost motion between the parts.

8. A support for tables or trays comprising a supporting bracket mounted upon a fixed support and having a guiding head, a hollow bar having a slot in its underside and receiving said head and slidable thereon, a shoe arranged in the head and adapted to be forced out into engagement with the wall of the bar to take up any lost motion between the parts, and a screw for forcing said shoe outward.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS L. RILEY.

Witnesses:
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C. H. TRESCH.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."